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## SURGERY IN THE MANAGEMENT OF PULMONARY TUBERCULOSIS

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Surgery in the management of pulmonary tuberculosis has, during the past decade especially, established its indispensable value. The relatively low operative mortality and the relatively high percentage of practical and clinical cures made possible in a specific group of patients whose future is otherwise considered hopeless, recommend this field of surgery both to the afflicted and to the physicians who are privileged to guide them. In this presentation, the rational basis for the value of surgery, its indications, and the common operative procedures employed, will be discussed. Finally, the author's limited experience in this work during the past five and one-half years will be cited.

The effectiveness of surgery as employed today in the management of pulmonary tuberculosis is due chiefly to the fact that it carries out the fundamental principle of rest. During the 55 years since Koch discovered the tubercle bacillus, rest is the only method of treatment of phthisis which has stood the test of time and has consistently resulted in cures.<sup>1</sup> The sanatorium, with its facilities for carrying out prolonged bed treatment is still the most important factor in the management of this ailment. Whereas the routine of the sanatorium conserves all of the body functions, pneumothorax, phrenic nerve interruption, and plastic operations are employed, when indicated, to bring about rest which is localized to the affected lung tissues.

Extending the principle of rest is not the only aim of surgery in this field. Extrapleural pneumolysis and thoracoplasty, by effecting the closure of pulmonary cavities, arrest hemorrhage, promote healing and create anaerobic conditions which are unfavorable for the growth of the tubercle bacillus.<sup>2,3</sup>

From the State Sanatorium, Wallum Lake, R. I.  
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When is surgery indicated in the treatment of pulmonary tuberculosis? To answer this question strikingly, the management of pulmonary tuberculosis may be compared to that of peptic ulcer. In the latter, surgery is employed for such complications as large chronic ulcers, repeated hemorrhages, obstruction, penetrating ulcers and perforation. Likewise it may in general be stated that surgery is employed for the complications of phthisis. Thus, chronic cases with persistent cavities or recurring hemorrhages, patients not sufficiently improved by conservative measures, by sanatorium care, and pneumothorax failures, are the ones who present the indications for surgical interference. To depart from comparisons which at best are inadequate, surgery concerns itself especially with the closure of cavities. Whether one considers the cavity as an essential part of phthisis or one looks upon the cavity in the nature of a complication of the disease is not of practical importance. Patients having persistently open cavities should have the benefit of competent surgical consultation and the advisability of applying operative collapse strongly considered.

Graeff,<sup>4</sup> in 1921, stated that the cavity is like a death sentence to its bearer. The late Dr. Barnes,<sup>5</sup> in studies at Wallum Lake, reviewed 1,454 cavity cases without selection, unilateral and bilateral, small and giant, acute or chronic, near the onset or near the end. He found that 80% died within one year, 90% within five years. In a later study Barnes<sup>6</sup> tabulated the outcome in a series of 50 patients, taken at random, with small unilateral cavities, who were proper subjects for thoracoplasty but who did not receive it. Of the entire group of 50, 40% were dead at the end of three years; of 44 patients who were followed for five years, 75% were dead. (Table 4) Other investigations point to a similar grave prognosis for the cavity patients.<sup>7,8,10</sup> It is fair to conclude that about 20% of cavities will close with proper bed rest, that the longer a cavity has remained open, and the more chronic the case, the less chance there is for spontaneous closure. This grave outlook for persistent cavity cases approaches that for malignancy and is relatively of more serious portent since in tuberculosis we are

dealing with younger individuals. In addition, the persistent cavity case is always casting off tubercle bacilli and constitutes a problem in public health.

Aside from the cavity, the phthisiologist and surgeon must consider the nature of the predominating lesion in the lung before advising operation. As a practical guide, patients are classified as having predominantly acute exudative, or chronic productive and fibrotic types of tuberculosis.<sup>9</sup> Surgery is infrequently recommended for patients having the acute exudative type; these are treated by bed rest usually supplemented with pneumothorax. In more than half of these individuals their small (less than 2.5 cm.) cavities with thin and soft walls will close spontaneously when confined to bed 22 to 24 hours daily for a period of six to eighteen months.<sup>4</sup> Of the chronic productive and fibrotic types of lesions, which present diffuse scarring of the lungs, often with deformities and displacements of the heart and trachea and narrowing of the intercostal spaces, only a small percent will recede with bed treatment; and their accompanying cavities which are thick, hard walled and of irregular outline, will seldom close spontaneously.

Finally, in the selection of patients it is usually those with unilateral involvement for whom surgical collapse is recommended. Very few cases meet this demand; often we have to deal with patients who have far advanced tuberculosis of one lung with cavity formation, and in whom the other lung contains either a healed and quiescent or a small exudative lesion. Experience has demonstrated that if the cavity on the worse side is closed, then the exudative lesion on the so-called good side will sometimes disappear. Patients having bilateral cavitation limited to the apex of each lung may be selected for bilateral thoracoplasty or a combination of thoracoplasty and apicectomy.

#### *The Type of Operation*

Churchill<sup>10</sup> has aptly stated that, whereas the selection of patients for operation is of emphatic importance, "the case of every patient with pulmonary tuberculosis is to be reviewed at frequent intervals with the question: 'What type of operative interference may we suggest in this case at this time?'" A discussion of pneumothorax is not within the scope of this presentation. However, it may be stated here that pneumothorax is still the procedure of choice whenever it can be induced. Some surgeons and specialists in pulmonary tuberculosis<sup>11</sup> already realize that lasting cure can be

obtained in selected patients in a much shorter time by means of some form of thoracoplasty collapse than is possible by means of pneumothorax, and with no greater mortality. The prediction is that in the future this point of view will be more widely adopted. Especially for patients with cavitation limited to the apex, it is probably more conservative to perform a 3 rib thoracoplasty combined with extrafascial pneumolysis, than to collapse the whole lung by means of pneumothorax for a period of two years or more. In this class of patient, a more certain chance of arresting the disease, after a shorter time interval, can be predicted by means of operation, than by pneumothorax, and with no greater risk.

*Intrapleural Pneumolysis:* As an adjunct to pneumothorax there is an operative procedure, intrapleural pneumolysis, which is often necessary in order to convert an ineffective collapse to one which is effective. Adhesions in the form of strings, bands, or stalks, extending from the surface of the lung to the chest wall, may prevent a cavity from closing. Only those adhesions which are obviously holding the cavity open need be cut; severing others is not necessary and is often dangerous. Not all offending adhesions can be safely cut by this method. The insertion of a thoracoscope into the thorax, under local anesthesia, is entirely without danger and visualization and transillumination of the involved adhesions enable one to determine whether they can be interrupted safely with a cautery.<sup>12</sup> The X-ray is not to be relied upon. When the offending adhesions cannot be managed by this method, open pneumolysis or some form of plastic operation is advised. For the procedure of open pneumolysis the thorax is entered through an intercostal incision or by the removal of a section of a rib, and the adhesions are cut under direct control and vision. This method, although entirely feasible, is rarely indicated.

Intrapleural pneumolysis is not without danger. Sudden death from air embolism, dangerous hemorrhage, and complicating empyema are the pitfalls. Therefore, in the absence of other contraindicating factors, it is preferable to discontinue the inadequate pneumothorax and resort to a plastic procedure rather than attempt the cauterization of adhesions which are too complicated to manage with facility.

In 22 instances of intrapleural pneumolysis the writer has had one death from cerebral air embo-

TABLE 1.  
Wilms-Sauerbruch Thoracoplasty: 19 patients, 46 operations.

	Sex	Age	Date of Op's	Stages Ribs	Acid Fast	Result	Remarks
1.	F	26	8/31	4-5-2	—	P. C.	Patient considers herself entirely well. Does full time housework.
2.	M	31	10/31	5-4-2	#	L. D.	Died 8/32 of tuberculosis. Was unimproved.
3.	M	27	11/31	6-5	#	I.	Reoperated. Table 2, No. 2.
4.	M	22	12/31	6-3-2	—	P. C.	Was working. Suicide 7/34.
5.	F	33	12/31	5-6	—	U.	Sputum negative. Often raises blood.
6.	M	32	3/32	6-5-6a	—	I.	Marked dyspnea.
7.	F	28	4/32	5-4-2	—	P. C.	No sputum, no dyspnea, keeping house.
8.	M	32	4/32	4-4	—	G. I.	Radio operator, full time.
9.	F	43	6/32	5-6	0	P. C.	No sputum. All housework.
10.	F	24	8/32	6-5	—	G. I.	2 ch. since op. Some housework.
11.	M	28	8/32	6-5	—	G. I.	Working part-time.
12.	F	14	8/32	6-5	—	P. C.	Housework.
13.	F	43	9/32	6-2	—	L. D.	Died 6/36 of tb. Temporary impr.
14.	M	22	9/32	6-5	0	P. C.	Working full time; entirely well.
15.	F	29	10/32	6-5-2a	—	G. I.	Married since. Light housework.
16.	F	25	11/32	5-4-3a	0	P. C.	
17.	M	44	11/32	7-4	—	L. D.	Died 6/36. Was doing light work.
18.	M	26	12/32	6-5	—	P. C.	Auto service, full time.
19.	M	51	4/33	5-3a-6	—	I.	Recently returned to sanatorium.

## NOTATIONS

#—Positive.

P. C.—Practical cure, free from all symptoms of tuberculosis and able to perform a full day's work.

G. I.—Greatly improved, often referred to as clinical cures. Able to perform light work or a satisfactory day's work. May have a small amount of sputum negative for tubercle bacilli, otherwise they are free from the symptoms of the disease.

I.—Improved, unable to work, sputum usually still positive, have to continue curing.

L. D.—Late death, not connected in any way with the operation.

lism. A small vein near the anterior mediastinum was inadvertently opened into. A very slow trickle of blood, about 30 drops to the minute, was noted. Facial twitchings and epileptiform convulsions and unconsciousness occurred almost instantly. Supportive measures failed and death ensued in about seven minutes. In another instance, an intercostal artery which was pulled down by an adhesion began to bleed profusely, and had to be ligated and controlled by open thoracotomy.

*Phrenic nerve* interruption removes the activating mechanism of the hemi-diaphragm, and allows it to remain in an elevated position. This results in relaxation of the lung structure which may bring about the desired closure of a cavity. More often than not, this simple and apparently harmless operation, performed under local anesthesia through a small incision about the clavicle, proves disappointing. It is sometimes dangerous, for, while waiting in fond hope that the cavity will close, the patient loses the opportunity for effective operative collapse by virtue of an embarrassing spread of the disease to the other lung. The most common practice today calls for a temporary paralysis of the nerve by crushing. If distinct benefit is noted after approximately six weeks, especially if the cavity has closed, the paralysis is made permanent by the "removal" of the nerve. Otherwise, no further

time should be lost in carrying out a plastic operation unless pneumothorax is thought advisable and can be induced.

*Apiculysis* with extra-pleural packing, or plombage, is a selective type of collapse that has been used especially in European and Scandinavian countries. Under local anesthesia, through a small area where a section of rib has been removed, the affected, cavity containing, apical portion of the lung is freed extrapleurally from the dome of the chest. The apex of the lung is then fixed in a collapsed position by placing beneath the upper ribs a permanent (paraffin, fat) or temporary (rubber dam, gauze, inflated bags) packing. It is a relatively simple procedure and has resulted in many cures. The introduction of foreign substances, however, is not appealing. These often slough into the lung especially into thin walled cavities near the surface, and create bronchial fistulae. It is definitely indicated in those patients in whom it is imperative to close a cavity quickly by a plastic procedure, and who are too ill, too old, or present other serious contraindications to thoracoplasty. It should not be recommended as a substitute to those who are proper subjects for thoracoplasty merely because of its simplicity. In two patients in whom this procedure was carried out one cure was obtained and one failure. In the latter, there has been marked clinical improvement but the patient has a bronchial fistula.

TABLE 2.  
Brauer Thoracoplasties: 24 patients, 42 operations.

	Sex	Age	Date of Op's	Stages Ribs	Acid Fast	Result	Remarks
1.	M	31	8/31	Atypical	#	I.	Reoperated, see table 1, No. 8.
2.	M	28	12/32	5-4a	—	P. C.	Laborer, full time.
3.	M	55	2/33	5	#	U.	Unimproved. Incomplete operation.
4.	F	39	5/33	5	—	O. D.	Pneumonia, contra-lateral lung, died 8th post-op. day.
5.	F	31	8/33	3-5	—	P. C.	Housekeeping.
6.	F	38	9/33	3-5	—	P. C.	Housekeeping.
7.	M	33	9/33	4	—	M. I.	Still at san. Bilateral cavitation to begin with. Needs further surgery.
8.	M	29	10/33	5	—	O. D.	Chest wall flutter and anoxemia; died 5th post-op. day.
9.	M	33	11/33	3-4	—	P.C.(L.D.)	Died 2 years later. Autopsy: generalized miliary tb./superimposed infection.
10.	F	26	12/33	3-3	#	I.	Reoperated by method of Semb. Has no sputum now. Will be a P. C.
11.	F	29	1/34	3-4	—	O. D.	Chest wall flutter, pneumonia lower lobe same side; died 6th day p. op.
12.	F	30	1/34	3-3	—	P. C.	Housework, 1 child since op.
13.	M	33	1/34	3	#	W.	Incomplete op. Putrid lung abscess same side, following 1st stage.
14.	F	22	1/34	3	—	O. D.	Auto-tuberculinization, died 4th day post-op., hyperpyrexia, 108 F.
15.	F	27	2/34	3-3-3	—	P. C.	Housework.
16.	F	26	4/34	2-2	—	P. C.	Attends high school; all activities.
17.	M	42	11/34	3-3	—	G. I.	Not working, but able to do light work.
18.	F	26	4/35	3-3	—	P. C.	Ill 8 yrs., at sanatorium 7 yrs. before operation. Entirely well now.
19.	F	36	6/33	3-3	—	M. I.	Still at sanatorium.
21.	M	28	10/35	3-3	#	U.	Reoperated by method of Semb, 10/36, too soon for final classification.
20.	M	31	9/35	3-3	#	U.	Unimproved by operation. At sanatorium.
22.	F	29	10/35	3-2	#	U.	Had severe bronchiectasis of lower lobe of same side before operation.
23.	M	47	10/35	3-3	#	I.	Still at sanatorium. Bronchial fistula following plombage 5/35.
24.	M	29	4/36	3-3	#	M. I.	

## NOTATIONS

U., unimproved; O. D., operative death; W., worse; M. I., moderately improved. Other notations same as table 1.

*Thoracoplasty* as employed in the management of pulmonary tuberculosis is a collapse operation which involves the subperiosteal resection of entire ribs or segments of ribs. The soft parts of the chest wall are allowed to fall in; from the periosteum new bone is formed in the collapsed position, and the rigidity essential to the thoracic mechanism is thus re-established. Obvious deformity as a result of the operation is only rarely apparent; more often a scoliosis, due to the retraction of the chest wall on the involved side, is corrected by means of the operation. (Alexander)

Until recently the so-called *Wilms-Sauerbruch operation* was employed. It is an excellent operation and many cures were obtained by its means, with a relatively low mortality when carried out in two or more stages. In this operation small segments usually of all the ribs were removed close to the spine. In patients having very large cavities the overlying transverse processes posteriorly and the

overlying ribs antero-laterally were also resected. The *Wilms-Sauerbruch* type of operation was employed by the author in 19 patients. Four of these required supplementary antero-lateral rib resections. Table 1 is an analysis of this group of 19 patients showing the approximate date of operation, the number of ribs removed at each stage and the results. There were no operative deaths in this group. One patient died 10 months after operation from the natural progress of his disease. He was a patient who had been steadily getting worse; the operation did not influence his condition favorably or unfavorably. Another patient committed suicide 3 years after operation. He was a clinical cure, free from all signs and symptoms, and had been working. Two other patients, who were temporarily improved by the operation died forty-two months, and forty-five months, respectively, after surgical collapse. Twelve patients have their disease arrested; eight of these are entirely well (practical

TABLE 3.  
Combined Thoracoplasty and Extra-facial Pneumolysis.

Sex	Age	Date of Op's	Stages Ribs	Acid Fast	Result G. I.	Remarks
1. F	29	8/36	3	0	G. I.	Practical cure predicted.
2. M	29	10/36	3	#	U.	Still at sanatorium.
3. F	22	11/36	3	0	G. I.	Has lost all sputum since op. Practical cure predicted.

TABLE 4.  
Tabulation of Cases With and Without Operation.

	No. of Cases	Pract. Cures	G. I.	I.	U.	W.	Op.	Deaths Late	Total
Sauerbruch	19	8	4	3	1	0	0	3	3
Brauer	24	7	2	5	4	1	4	1 <sup>(a)</sup>	5
Semb	3		2		1		0	0	0
Total	46 thoracopl.	15	8	5	5	1	4	4	8
	42 patients	35%	20%	12%	12%	2%	9.5%	9.5%	19%
	92 operations			54%					
Average 3.2 years				Arrested					
No operation (Barnes) :									
End of 3 yrs.	50							20	40%
End of 5 yrs.	44							33	75%
Freedlander <sup>16</sup> (2 to 4 yrs.) :									
Operated	85		43%	14%	7%	12%			17%
Not operated	58		4%	4%	4%	42%			35%

#### NOTATIONS

Same as tables 1 and 2.

Arrested cases include all the practical cures and all greatly improved.

<sup>(a)</sup> One case in this group was considered a practical cure up to the time of his last illness; in the final tabulation it is counted as a late death. See table 2 No. 9.

cures) and are able to perform a full day's work, four are clinical cures and are able to perform light work. Three are listed as improved; one of these was later re-operated and became a practical cure and is now working as a laborer.

The Wilms-Sauerbruch type of operation should not be lost sight of; it may be employed to good advantage, supplemented by antero-lateral thoracoplasty,<sup>13</sup> for poor risk patients who have extensive tuberculosis with cavitation involving two-thirds or more of one lung. However, it will be seldom indicated, as the more limited type of operation to be described is more conservative and entirely effective for the great majority of patients who require thoracoplasty.

The modified Brauer thoracoplasty is the operation which is generally being employed today. It is a selective type of collapse which affects the involved part of the lung and leaves the healthy part to function freely. It involves a resection of from three to nine ribs, according to the degree of downward extension of the disease. The first two ribs and their cartilages are removed completely; the third rib is removed completely on the right side but only up to the nipple line on the left side. When

additional ribs require removal they are resected from the spine to about the anterior axillary line. The transverse processes are usually also resected. The collapse is accomplished in stages; no more than three ribs are now resected at any one stage. If this rule is strictly adhered to, the mortality will be very low. Thus, in a series of 24 patients managed by this method, only one death occurred following an operation limited to the resection of three ribs. (Table 2.) The three other deaths in this series followed stages in which five, five, and four ribs, respectively, were removed. These occurred during the transition period when the old type operation was being superseded by the new type, before it was definitely recognized that it is hazardous to attack too many ribs at one time when wide excisions are practiced.

*Thoracoplasty combined with extrafascial pneumolysis\** will henceforth be the operation most frequently employed whenever a plastic collapse is indicated. In this operation, which was recently described by Carl Semb of Oslo,<sup>15</sup> the entire first

\*Lilienthal<sup>14</sup> has for many years made use of a similar method which has been very effective.

and second ribs and a large section of the third are removed. The uppermost intercostal bundles are severed from near their spinal attachments. A plane of cleavage is then detected outside of the parietal pleura and the entire apex of the lung is freed from its anchorage all around. This mobilization can be extended downward as far as the root of the lung when necessary. When dealing with large cavities, the transverse processes are also removed. If additional collapse is required the subjacent ribs are dealt with in the usual manner always remembering not to resect more than three ribs at any one stage.

This operation promises to be accompanied by a low mortality and to result in a relatively high percentage of clinical cures. The necessity for reoperation and supplemental operations will be rare. A one stage, 3 rib resection will be sufficient for many patients who heretofore would have required two stages with resection of five ribs; likewise, a two stage, five or six rib excision will probably suffice in lieu of the two or three stages of six to nine ribs previously required to effect the same degree of collapse. The reason for this is apparent when one considers the importance of the cavity and of bringing about its closure in order to accomplish a cure. The older procedures collapsed the chest wall essentially toward the mediastinum; the cavity often remained open because it was still suspended through its extrapleural connections to the spine, the dome of the thorax, and the mediastinum. No degree of thoracoplasty collapse alone was able to accomplish closure of some cavities. The combined operation, however, brings about collapse from above downward and releases the moorings from all surfaces of the apex so that this portion of the lung and its contained cavity may retract concentrically. Adding extrapleural pneumolysis in this manner to thoracoplasty, accomplishes for the average thoracoplasty what intrapleural pneumolysis does for the suspended cavity in pneumothorax with adhesions. More than that, it anticipates the suspended cavity and prevents it from being an embarrassing element following an otherwise efficiently performed thoracoplasty.

Three patients have been managed by this combined method. Two of these had previous thoracoplasty and presented the typical suspended cavity near the mediastinum. Only a one stage operation was required in each. One patient has lost all sputum and is on the road to becoming a practical cure. The second patient remains unin-

proved. The third patient managed by this method is still under surgical supervision; she has already lost all sputum and will not require any further operation beyond the three rib resection which she has already had. (Table 3.)

#### Summary

1. The importance of the cavity and of bringing about its closure in the management of pulmonary tuberculosis has been stressed.
2. Efficient methods of surgical collapse which are available when other methods fail have been described; their beneficent possibilities have been suggested; and their application should not be unduly delayed when definitely indicated.
3. The author's experiences with intrapleural pneumolysis, "plombage," the Wilms-Sauerbruch thoracoplasty, the modified Brauer thoracoplasty, and the newer combined operation of Semb have been noted briefly.
4. The strict rule of not removing more than three ribs in any one stage in thoracoplasty requiring wide rib excisions, has been strikingly emphasized by the author's own experience. Only one of the four deaths which occurred in 46 thoracoplasties (92 stages in 42 patients) followed an operation in which this rule was adhered to.

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#### DISCUSSION

**DR. JOSEPH C. O'CONNELL:** I have been very much interested in Dr. Windsberg's paper which I think is very concise, yet comprehensive, and shows a considerable knowledge of, and experience with, this very interesting and important branch of surgery. My own experience with this work has been of much more recent date, but what I have seen and done has convinced me of the great value of these surgical procedures in properly selected cases of tuberculosis. In the selection of cases I feel that consultation by the surgeon and a specialist in tuberculosis, who has had for some time supervision of the case to be considered, is of importance, as I feel that it is very necessary that the patient should have been under observation for some time, and at least holding his own under treatment. I think that a case which has been going down hill, under treatment, is not suitable for operative interference. The author has brought to our attention the various procedures: Pneumothorax, Intra pleural pneumolysis, Extra pleural apicoplasty and Plombage; Operations on the phrenic nerve and the various types of Thoracoplasty. He has also shown the advance made in this latter procedure. He shows that he has had a considerable experience in this work and I believe that the results, as shown by his charts, compare very favorably with those of other men who have been doing a great deal of this work. He has also shown by his charts a considerable lessening of mortality in cases with cavity formation following surgery, over that of similar cases treated entirely medically. I believe that surgery should almost always be limited to the cases of the productive type with cavity formation. Of these procedures mentioned, first in the order of importance and frequency, we must place pneumothorax, augmented at times with intra pleural pneumolysis, which will often change unsatisfactory to satisfactory cases. However, I believe that if a case proves unsatisfactory, the method should not be persisted in for too long a time. I think that phrenic nerve operations may be of great importance as an auxiliary method in the treatment of the first group of cases; when successful, proving of great value, but unfortunately the desired results are not always obtained. In these unsuccessful cases I believe that the poor result is often due to the fact that the phrenic nerve may be made up of several branches which may unite lower than the usual seat of phrenicectomy. If this is borne in mind and a more radical operation on the nerve is performed, either by severing the several branches or probably by avulsion of a long segment of the nerve, the results are apt to be all that one may desire. I believe, as Dr. Windsberg has stated, that the combined operation of Dr. Semb is a great improvement over the older methods such as the modified Brauer or Sauerbruch operation, as in the older operations it was necessary to collapse and put out of commission a whole lung, whereas under the newer type of operation, that portion of the lung containing the cavity may be collapsed, allowing the normal part of the lung to function. I think, however, that there may be some danger of activating the process in the lung by the added manipu-

lation necessary. I believe that the author's observation on the limitation of operation to three ribs at each sitting, is also very good, although the removal of good sized sections of five or six ribs, apparently, at times gives rise to no unfavorable symptoms. However, if more ribs are removed the intervals between steps of the operation must usually be made longer and the patient's stay in the hospital is usually not shortened. Since having had some experience in this work I have been very much impressed by the fact that the operation, which I, and I believe many of us had considered a very shocking and mutilating operation accompanied by great dangers, is not particularly hard on the patient and is usually followed by a quite comfortable convalescence after the first few days; is not mutilating and is the source of a great deal of satisfaction to the patient, who usually takes a new outlook on life, and looks forward to a cure of which he had hitherto had no hope. I believe that the use of cyclo-propane, as an anesthetic, greatly reduces the shock to the patient and is an important cause in the lessening of mortality. I wish to congratulate Dr. Windsberg on his paper and on the good work which he has been doing in this line.

**DR. J. MURRAY BEARDSLEY:** I would like to congratulate Dr. Windsberg on his very excellent paper. There are only two points upon which I might comment. He stated that his policy with regard to phrenic nerve operation was to do a crushing and if a beneficial result were obtained at the end of six weeks, he then did a phrenic exeresis. After doing a phrenic crushing I wait six months or until such time as returning diaphragmatic motion is noted. I will then probably repeat the crushing once or twice, depending upon the indication at that time—the point being that with pulmonary tuberculosis we must consider the disease as a whole and remember the possibility of later trouble developing in the opposite lung the treatment of which might be handicapped by the diminished vital capacity resulting from a permanently elevated diaphragm, if the indication for collapse therapy did exist on that side. With regard to limiting the operation of thoracoplasty to three ribs at all times—I have removed four ribs in the second stage operation when I felt the condition of the patient was good. The idea of limiting the operation is to shorten the time and to avoid shock, and it has been my experience that as a rule the first stage with the removal of three ribs is more time consuming and shocking than the second stage with the removal of four. I feel, also, that the collapse is augmented by a falling in of the scapula which is accomplished by a removal of the seventh rib.

**DR. WINDSBERG:** In regard to phrenic nerve paralysis no definite rules can possibly include all situations. Each patient's case has to be individualized to determine when, if at all, a temporary paralysis should be converted into one which is permanent. What Dr. Beardsley stated is for general purposes an excellent guide. In this presentation the author was concerned especially with the problem of the closure of the cavity in pulmonary tuberculosis. It seems reasonable that when a cavity has closed following a temporary paralysis no undue time should be allowed to go by before the paralysis is made permanent. When wide rib excisions are practiced, it is especially in the second stage of the operation, the author emphasizes, that it is dangerous to deal with more than three ribs at a single sitting. It is here that a relatively large expanse of chest wall is left unprotected by each rib removed, and that the danger of paradoxical respiration due to a "soft" chest wall is to be feared. This is true to a lesser degree during the first stage because of the protection afforded by the scapula and the relatively smaller area of chest wall left "bare" by each rib removed. If the seventh rib requires removal it is more safely accomplished at a third sitting as a minor procedure under local anesthesia. The mortality in any large series will be definitely lower if one approaches the operation with the question: "Shall I deal with three ribs or less than three." The converse of this is also true.

### THE REORGANIZED STATE DEPARTMENT OF HEALTH

EDWARD A. McLAUGHLIN, M.D.

RHODE ISLAND DEPARTMENT OF PUBLIC HEALTH

The Administrative Code Act, passed in January and amended in May, 1935, so reorganized the entire State government that the powers and duties previously distributed among the numerous State administrative agencies were vested in eleven departments: The Governor, Secretary of State, Attorney-General, General Treasurer, Director of Public Welfare, Director of Public Works, Director of Taxation, Director of Education, Director of Labor, Director of Agriculture and Conservation, and Director of Public Health. This Reorganization Bill replaced the Rhode Island Public Health Commission, which had five members, with a Director of the Department of Public Health. In this Department were placed the following Divisions: Sanitary Inspection, Narcotic Drugs and Pharmacy, Purification of Waters, Foods and Drugs, Athletics and Examiners.

In the Department of Public Health, the Division of Administration, which might be termed the Main Office, does the administrative work for the whole Department. This includes preparing the budget, making out payrolls, supervision of revenue and the licensing of barbers, hairdressers, chiropodists and dentists. The Main Office supervises the purchase and distribution of all biological materials and of all purchases made in the Department. In the Division of Administration are the Bureaus of Maternal and Child Health and of Preventable Diseases. This latter bureau combines the work formerly done by the Venereal Disease Division and the Division of Epidemiology, and also Supervises rural health and the District Health Units, made possible with Federal funds. Under the Social Security Act, for the fiscal year ending June 30, 1937, \$55,633.00 was granted by the U. S. Public Health Service to expand public health services in the State of Rhode Island. This was Rhode Island's share in an \$8,000,000 appropriation, based on the amount of money already expended for public health work in Rhode Island and on population. We were fortunate in obtaining all the money that Rhode Island could get under this Section. These funds were used partly for train-

ing four physicians in public health work, for five sanitarians and six nurses. These individuals were trained at the Massachusetts Institute of Technology and at Columbia University. A part of the funds were used to strengthen the Central Administration and with the balance the salaries of those employed in the District Health Units were paid. District Health Units were set up in Woonsocket, in Bristol and in Peacedale. Each of these units consists of a health officer, a sanitarian, a public health nurse and a clerk. The units are branches of the State Department of Public Health and offer a complete full-time local health service, cooperating with the local health workers. By this decentralization of the State health service, allowing closer contact with local communities, we hope to provide a much more efficient health service for all parts of the State. The units will not engage in the practice of medicine nor will they take work away from practicing physicians or from other health or welfare workers. The aim is to assist such existing agencies as physicians, nursing organizations, parent teachers associations and local health officers. By this assistance it is hoped to increase the value to the community of the services rendered by these agencies which have already demonstrated their worth as essential parts of the community's life. Such units serve a purely public health function in prevention of disease, prolongation of life and lessening of physical and mental deficiencies, through organized community effort.

In the Preventable Disease Division, the present Surgeon-General, Dr. Parran, has started an intensive program for the control of syphilis and gonorrhea. In order to successfully control these diseases we must have the cooperation of the private physicians. The State Department of Public Health is required by law to immediately use every available means to locate persons infected or suspected of being infected with venereal disease and to ascertain the source of such infections. The State Department of Public Health is invested with full powers of inspection and examination. Bear in mind that by law the information submitted by you must be held secret. The law requires any physician who treats a case of venereal disease to make a report of such case, by name or by separate number, to the State Board of Public Health. I earnestly request your cooperation in this and ask you to inform the State Department when your patient ceases to continue treatment with you, if he

Read before the Providence Medical Association at the Ninety-first Annual Meeting, Providence, January 4, 1937.

is still in the infectious stage. Only by following up the infectious delinquents can we hope to prevent the spread of these diseases. At the present time the State Department of Health supplies free medicine to clinics. We hope in the very near future to find sufficient money to supply arsenicals and other anti-syphilitic medicines free to the private physician. The State Department of Health stands ever ready to help the private physician in this work and at no time intends to take cases away from him.

In the Administrative Division there is also a sub-division of Industrial Hygiene set up this year by legislative act: 1. To make studies of industrial hygiene and occupational disease problems in industry; 2. to recommend to the legislature for enactment such measures as its studies and experience may demonstrate to be advisable and (3) to keep complete records of its studies, recommendations and other activities. The sub-divisions of Industrial Hygiene was made possible by an appropriation of \$11,500 by the State, matched with an equal amount appropriated by the Federal Government. In addition to this the Federal Government provided \$6,300 for the necessary laboratory equipment. Occupational diseases which come to your attention are reportable by law. I ask your cooperation in this matter. After September 15, 1936 the Compensation Law provides a maximum of \$200.00 instead of \$100.00 for medical services to an injured employee and \$250.00 instead of \$150.00 for the same services when more than 14 days hospitalization is needed. There is now no time limit for the length of service, which formerly was eight weeks.

Under the Social Security Act the State receives dollar for dollar for money spent for the promotion of maternal and child health. For the present fiscal year, which ends June 30, 1937, \$33,783.00 was appropriated by the Federal Government to match an equal amount to be spent by the State. With this increased amount, nursing services have been extended to parts of the State not previously covered because of lack of funds. It provides for an assistant physician in charge of child health, for another to assist in clinic work, for more nurses, for dental education and for increased clerical assistance and necessary equipment.

Financial aid to the State is received under another title of the Social Security Act, administered by the Children's Bureau in the Depart-

ment of Labor and is entirely apart from the funds received through the Public Health Service. With the aid of this fund a program of experimental immunization against whooping cough with Sauer's Vaccine has been instituted. The program calls for the immunization of groups of children under the age of five, in several communities, with a control group not immunized. As far as possible only those are immunized who are financially unable to have the services of a private physician, children whose parents bring them to outpatient clinics when they have any sickness. We try hard to avoid including in this group any child who comes to a private physician when sick, so that there may be no encroachment on the work of the private physician. It is hoped by this program to obtain definite information within a year or two as to the efficiency of this vaccine in the prevention of whooping cough. With Federal Funds a program to find incipient tuberculosis in children of high school age has been started. Positive cases are referred to the family physician for follow-up and a letter sent him as to our findings. These two important public health projects will eventually provide more work for the private physician and in no way encroach upon him.

In the Division of Maternal and Child Health there is a Crippled Children's Sub-Division, financed by \$5,000 appropriated by the State with an equal amount from the Federal Government, for the purpose of locating and providing necessary services for crippled children under the age of 21. This work consists in providing the necessary hospital care and braces for those in economic distress. This is the first time in the history of the State that money has been appropriated by the State for aid to crippled children. The amount appropriated is small compared with the amount available to the State from the Federal Grant. It is hoped that hospitals which have been doing free work for crippled children in the past will somehow be reimbursed from Federal money as they continue this work. There will be about \$40,000 so available after July 1st, which the State cannot match, but which could be matched by private funds. None of this money will be used for the hospitalization of crippled children who are under the care of a private physician or who can afford to pay a private physician. I hope that some way may be found to reimburse physicians as well as hospitals for the care of those crippled children in

their practice for which they are not already sufficiently paid.

The Laboratory Division comprises the following laboratories: Pathological, Bacteriological, Chemical, Toxicological and Food. The work of the laboratory division has increased greatly in the past year. This division stands ready to serve the physician at any time. Replies to the questionnaire sent out to physicians early last year, regarding the laboratory services which had been suspended, showed that 188 physicians desired to have surgical specimens examined, 437 requested blood examinations and 288 requested urine examinations. Because of these requests funds were provided to again render this service. It is understood that this service is only for those patients who in your opinion cannot afford to have work done in private laboratories. The laboratory provides day and night service. By contacting Mr. Edgar Staff at his home, emergency service will be provided, especially the Neufeld Test for pneumonia typing.

The Division of Vital Statistics continues to carry on the same work as formerly, recording the returns of births, deaths and marriages and transcribing the same to the Bureau of the Census at Washington.

The new Division of Sanitary Inspection is empowered to enforce the provisions of all general and public laws relating to the inspection of swimming pools, bathing beaches, camp grounds, barber shops, hairdressing parlors, eating and drinking places and other premises and properties of which the sanitation pertains to public health.

The Division of Narcotic Drugs and Pharmacies combines the work of two former boards, the Narcotic Board and the Pharmacy Board. This division enforces the Uniform Narcotic Drug Act. The law is very strict in regard to narcotic drugs but the Division of Narcotic Drugs and Pharmacy has not annoyed the physicians in keeping to the strict letter of the law because we feel that the registered physician acts in good faith and makes no attempt to violate the main purpose of the law. The law provides that a physician shall not prescribe or dispense a hypodermic syringe or needle without first having issued an official permit for the same on blanks furnished by this division and available upon request. This division also supervises the licensing and inspection of drug stores.

The Division of Purification of Waters replaces the old Board of Purification of Waters and performs the work formerly done by that Board. The function of this division is to prevent stream pollution by sewage or industrial wastes. It frequently tests the streams and rivers, traces the source of pollution found and corrects the same, whether caused by individuals, industrial plants or town or city sewage plants.

The Division of Foods and Drugs replaces the former Board of Food and Drug Commissioners. The Food and Drug law covers a very broad field, related to the purity of food and drugs, false advertising, misrepresentation, misbranding and the like. Samples collected by the food and drug inspectors are tested in the food laboratory, now a part of the general laboratory. The work of this division is extensive. Frequently foods are ordered destroyed because they have become spoiled or are dangerous for human consumption.

The Division of Athletics replaces the former State Athletic Commission. The function of this division is to supervise professional and amateur boxing and wrestling matches.

The Division of Examiners is a new division set up by the Reorganization Bill. Do not confuse it with the medical examiners, appointed by the Attorney-General and under his supervision. The Division of Examiners comprises eleven Boards of Examiners, performing the duties of the former boards of examiners in the examination of new applicants for the various arts and professions. It is interesting to note how the work of some of the former boards has now been divided. Formerly the Board of Barber Examiners had full control of the barber trade. The licensing is now done by the Division of Administration, the inspection by the Division of Sanitary Inspection and the examinations are now given by the three-man Board of Examiners in Barbering. A similar change applies to several other Boards, which formerly had full power over their particular art or profession.

In closing, I ask you to cooperate with the State Department of Public Health, which stands ever ready to serve you. I assure you that the State Department of Health will never encroach upon the private physician but hopes by these various programs to provide more, rather than less work for the private physician. We hope to interest the people of the State in "Public Health."

**THE RHODE ISLAND MEDICAL JOURNAL**

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**WARFARE AGAINST CANCER**

This month (March) has been selected by the Women's Field Army of the American Society for the Control of Cancer as the time to launch a nationwide campaign of lay education in cancer. For something over a year this campaign has been in the making, sponsored by the American Federation of Women's Clubs together with the American Society for the Control of Cancer. The first organization contributes the zeal and devoted interest of a large group of women who have recognized the modern menace of cancer and have determined to do something about it; the second provides a scientific body whose special function is the collection of cancer facts and the getting of them into the best possible form for educational presentation. Working together through national, state, and local committees these organizations have evolved their Women's Field Army, enlisting the aid of the state and local medical societies and health commissions. The special aid required of the State Medical Society is to supply speakers and this function it is preparing to fulfill through its Cancer Committee which has recently solicited names of volunteers from the various local societies. The list will be available to the community from which a call comes.

There can be no doubt of the great force behind this movement. It is the spontaneous revolt of a large body of American womanhood against the increasing menace of cancer. These women want the facts about cancer and they want their relatives and neighbors to have them, and if early recognition and proper treatment, instituted early, is the only present known way to combat cancer and to cut down the number of its victims, then they want to

know how they can recognize early symptoms and signs, and how they can get the benefit of the best that the community affords in diagnosis and treatment.

Obviously any such program of enlightenment must stand or fall eventually on the reception it receives from the medical profession. Some of us will think, as in the past many have, that such campaigns fill patients' minds with useless fears and make some of our neurotics harder to deal with, giving them new possibilities to worry about. We must not let the possible harm to a relatively few such neurotics outweigh the great good that such a campaign will do for the great body of healthy-minded people. For it is now amply proven (1) that success in cancer treatment is almost directly proportional to the stage of advancement in which the cancer is found, when first seen by a competent physician, and (2) that only through *lay publicity* can the patient be taught to recognize symptoms and signs early enough, and be given the encouragement necessary to get him to submit early to treatment.

Others of us, in our reception of patients that come to us as a result of this campaign, may do great good or harm. If such a patient comes to us, let us hear his story, make a careful examination, and if we do not think his lesion to be cancer, let us not make light of this finding and take the occasion to tell him to forget about it. Let us congratulate him that he has had the good sense to be suspicious and to come for reassurance. Let us take the occasion to further educate him and send him out to preach the gospel to his friends. One of his friends may turn up with a lesion that is an early cancer.

Let us all lend the weight of our influence and our knowledge to this nationwide effort. Let us give our time as speakers and last but not least let us give patients who come to us with minor ailments, after being educated, careful and thorough attention, impressing upon them our belief in the value of this teaching, for the authority of *their own doctor* after all means more than anything they hear from the lecture platform. The fight against cancer is a fight against ignorance and fear. The Women's Field Army is bringing its force to bear to overcome ignorance and fear with knowledge. Let us give whole-heartedly of our time and influence to "hold up their hands" and make their campaign a success.

## RHODE ISLAND MEDICAL SOCIETY

### Program of Sunday Health Talks

*Submitted by the Committee on Education,  
Russell S. Bray, M.D., Chairman*

Because of a nation wide hook-up, WPRO has found it impossible to arrange a satisfactory time for our local Sunday broadcast. Therefore, feeling that there are greater advantages to be gained through an informal contact with a representative audience, it was decided to cancel the broadcast of the present series of lectures.

The lectures will be given as usual on Sunday afternoons at 3:30 o'clock during the month of March.

#### Speakers:

*March 7th. Drs. Herman C. Pitts and James A. McCann, "Cancer — Facts and Fancies."*

*March 14th. Drs. Charles S. Christie and D. V. Troppoli, "Headache — Medical and Surgical Aspects."*

*March 21st. Dr. Charles F. Gormly, "How to Grow Old Gracefully." Dr. Henry L. C. Weyler, "Why Poison Yourself — The Nostrum Evil."*

*March 28. Drs. Alfred L. Potter and David R. Brodsky, "Modern Trends in Obstetrics."*

## RHODE ISLAND MEDICAL SOCIETY

### Meeting of the Council

January 21, 1937

The January meeting of the Council was called to order by the President, Dr. John E. Donley, in the Medical Library Building, at 4 P. M.

Dr. Mowry moved that the name of Dr. Edgar B. Smith be placed on the retired list. The motion was carried. Dr. Mowry then moved that the name of Dr. Frederick N. Brown be placed on the retired list. The motion was carried.

Dr. Mowry reported that certain bonds owned by the Society had been called and discussed the use to which the proceeds of these bonds should be put. He suggested the investment of the beforementioned proceeds in high grade common stocks, always keeping in mind that safety of the principle is the first consideration. Dr. Hammond moved that the Treasurer be given authority to invest the money obtained from the sale of the called bonds in high grade common stocks along the line of diversifica-

tion which Dr. Mowry described. The motion was seconded and unanimously approved.

Dr. Holt raised the question of advisability of encouraging District Societies to require their members to join the State Medical Society. Dr. Mowry moved that the Council deems it inadvisable at the present time to advise the District Societies to drop any member from their rolls because he has not joined the State Society within a given time. It was so decided.

The meeting was adjourned.

Respectfully submitted,

GUY W. WELLS, M.D., *Secretary*

## Meeting of the House of Delegates

January 21, 1937

The regular January meeting of the House of Delegates was called to order by the President, Dr. John E. Donley, at 5 P. M.

1. The Secretary made a verbal report of the transactions at the meeting of the Council.
2. The Secretary then reported for the Nominating Committee the name of Dr. Edward S. Brackett for Second Vice President to fill the vacancy created by the death of Dr. James W. Leech.
3. The President then appointed the following to serve as a Nominating Committee for the year 1937:

Dr. Roland Hammond, Providence, Chairman  
Dr. John F. Kenney, Pawtucket  
Dr. William S. Streker, Providence  
Dr. Henri E. Gauthier, Woonsocket  
Dr. Linwood H. Johnson, Westerly

4. Dr. Charles L. Farrell discussed the advisability of encouraging members of District Societies to join the Rhode Island Medical Society.

5. It was then moved and approved that each District Society be asked to conduct a campaign in whatsoever way it deemed best to increase the membership of the State Society.

6. The President appointed Dr. Charles Bradley as Chairman of the Publicity Committee.

7. The President reported to the House of Delegates the appointments of delegates to New England Medical Societies which he had made at the December meeting of the Society. The meeting was then adjourned.

Respectfully submitted,  
GUY W. WELLS, M.D., *Secretary*

**PROVIDENCE MEDICAL ASSOCIATION****Minutes of the February Meeting**

The regular monthly meeting of the Providence Medical Association was called to order by the President, Dr. Peter Pineo Chase, on Monday, February 1, at 8:30 P. M. The minutes of the last meeting were read and approved.

The Secretary read a communication from Dr. Herman C. Pitts, Chairman of the Cancer Committee of the Rhode Island Medical Society, asking for volunteers to speak at public meetings sponsored by the Women's Field Army of Rhode Island.

Dr. Ira C. Nichols read an obituary on Dr. George E. Clark. It was voted to spread this on the records and to send a copy to the family.

The President announced the appointment of the following committee to study the question of reorganization:

Dr. William S. Streker, Chairman  
Dr. Harry C. Messinger  
Dr. William P. Buffum  
Dr. Frank B. Cutts  
Dr. William A. Horan

The first paper of the evening was given by Drs. Chester W. Howe and William J. Bell of the Rhode Island Hospital, and was entitled "Comparative Results of Regular and Protamine Insulin Therapy." The paper was discussed by Drs. Lawson, Greenstein and Kramer.

The second paper was read by Dr. Frank B. Littlefield, and was entitled "Sclerosing Injections as an Adjunct to Surgery." The paper was discussed by Dr. Chase.

The meeting was adjourned at 10:00 P. M.  
Attendance 89. Collation was served.

Respectfully submitted,  
HERMAN A. LAWSON, M.D.,  
*Secretary.*

**Report of the Blood Transfusion Bureau**

Donors were provided for 79 transfusions. Twenty-five of these 79 cases were charity transfusions; in partial or total payment therefor \$215.75 was disbursed from the Charity Fund. This leaves a balance in Savings Account of \$1,268.04. The 47 paying cases yielded an income of \$117.50. Expenses of \$50.05 left a net income for the year of \$67.45.

The committee is pleased to report a contribution to the Charity Fund of \$25.00 from the Mary

Dexter Fund, Inc. The Bureau has now been in operation almost two years and appears to be filling a real need in the community.

Respectfully submitted,

FRANCIS H. CHAFEE, M.D.,  
*Chairman and Treasurer*

**PAWTUCKET MEDICAL ASSOCIATION****February Meeting**

The regular meeting of the Pawtucket Medical Association was held on February 18, 1937, at the Nurses' Auditorium of the Memorial Hospital.

It was voted that a copy of letter which was sent by Dr. Chas. L. Farrell, chairman of the committee on Public Health Clinics to Dr. Arthur Brown, chairman of the Public Relations Committee of the Providence Medical Association, be mailed to each member of the association.

Pawtucket Medical Association went on record as opposed to the activities of Dr. John Pickney in extension of his diagnostic service to Child's Restaurants. It was further voted that the Secretary write to the Secretary of each district society notifying him of the action of the Pawtucket Medical Association.

The secretary was instructed to contact each member of the Pawtucket Medical Association to accept a speakers appointment on cancer as requested by Dr. Herman C. Pitts, chairman of the Cancer Committee.

Dr. Charles L. Farrell was given a vote of appreciation for the good work he is doing as chairman of the Public Health Clinics. The Pawtucket Medical Association voted that in the future only the President of the State Medical Society be the invited guest at the annual banquet.

A list of the nominations for 1937 and 1938 was presented by the nominating committee, the officers to be Dr. Edward Cormier, President; Dr. Charles L. Farrell, Vice President; Dr. Earl Mara, Treasurer and Dr. Thad A. Krolicki, Secretary.

Mr. Carleton Sawyer was the speaker of the evening and spoke on the growing and manufacture of tobacco, and of the influence of cigarette smoking on mucous membranes.

The collation served. Meeting adjourned at 11:45 P. M.

THAD A. KROLICKI, M.D.  
*Secretary*

## NEWPORT MEDICAL SOCIETY

### January Meeting

At the Annual Meeting of the Newport County Medical Society, held on January 26, 1937, the following officers were elected:—

<i>President,</i>	Dr. Philip E. Clark
<i>First Vice-President,</i>	Dr. James C. Callahan
<i>Second Vice-President,</i>	Dr. Alfred M. Tartaglino
<i>Secretary,</i>	Dr. Samuel Edelson

<i>Delegates to the Rhode Island Medical Society,</i>	Dr. Edward V. Murphy,
	Dr. Wm. Arthur Stoops

<i>Councilor,</i>	Dr. Charles W. Stewart
<i>Censor,</i>	Dr. Edward V. Murphy

The President appointed an Executive Committee composed of

Dr. James C. Callahan,
Dr. Phillip S. Geller,
Dr. William M. Redman.

Dr. Eske Windsberg of Providence read a paper on the subject "Some Recent Advances in Thoracic Surgery."

## WOONSOCKET DISTRICT MEDICAL SOCIETY

### January Meeting

On January 14, 1937, the Woonsocket District Medical Society held its regular meeting at the Lafayette House, Foxboro, Massachusetts. Following a light supper, the guest speaker of the evening, Dr. Charles L. Farrell, of Pawtucket, explained in detail the accomplishments of the Caduceus Club. In spite of the inclement weather, the attendance was very satisfactory. Dr. James McCarthy, Jr., recently elected to the presidency, was in charge. It may be mentioned that Woonsocket had its "Medical Club" in 1929 and in 1930 and that before long, this Medical Club may be resuscitated, or a club similar in outline to the Caduceus Club may be formed.

## CHANGE OF ADDRESS

Dr. James P. Clune:  
To 156 Auburn Street, Cranston

Dr. Seebert J. Goldowsky:  
To 209 Angell Street, Providence

## Woonsocket Hospital

Members of the Woonsocket Hospital Staff are very proud of the new X-Ray equipment that was recently installed. Dr. Norman S. Garrison should be commended for his fine selection. This is but a morsel of a carefully planned renovation of the entire hospital. There has been marked improvement in the physio-therapy department, the new obstetrical ward is nearing completion and plans are being sketched for modernization of the present operating rooms, an addition that will add at least two more operating rooms and allow for emergency and utility rooms. These changes and the present enviable financial condition of the Hospital can be attributed to the management and to the liberal response given by the community to the annual appeal for contributions.

Dr. Joseph B. McKenna of Melrose and Tufts Medical College, 1936, is chief interne, being assisted at the present time by junior-interne, Ora Wagman, of Boston and Tufts Medical College, 1937.

The monthly meeting of the Regular Staff was held January 11, 1937, at 11:00 A. M. The President, Dr. T. Frank Kennedy, presided. A motion was made and unanimously approved that the Secretary be instructed to cast one ballot for the present officers, retaining them for the ensuing year. These officers are: President, Dr. T. Frank Kennedy; Vice President, Dr. Henri E. Gauthier; and Secretary-Treasurer, Dr. Thomas J. Lalor. The report from the Medical Board was read and approved. Case Histories were read and discussed. The meeting adjourned at noon.

On January 25, 1937, the monthly Clinical Conference was devoted to the presentation of a case from the Medical Service of Dr. J. H. McCooey, while Dr. V. H. Monti presented a case of Teanus.

## Rhode Island Hospital

Dr. F. Charles Hanson of Southbridge, Mass., who interned at the R. I. H., from October, 1933, to October, 1935, and at the Eye and Ear Infirmary in Newark, New Jersey, from February, 1936, to February, 1937, has returned to Providence, intending to do Eye, Ear, Nose and Throat work. Dr. Hanson was graduated from Tufts Medical School in 1933.

Dr. Frederick Stephens' internship at the R. I. H. terminated on January 31st. On February 1st, he entered the Massachusetts Eye and Ear Infirmary

for a period of 26 months. He expects to do Pathological and post-graduate Eye work until June 1st, when he will take up the regular internship. Dr. Stephens secured his B.A. from Syracuse University in 1931 and was graduated from Syracuse Medical School in 1934. Before coming to the R. I. Hospital, he spent four months in the Pathological Department of the Syracuse Memorial Hospital and one month at the Providence Lying-In Hospital.

Dr. Robert Ladd Richards, of Portland, Maine, a graduate of New Hampshire University and Harvard Medical School, 1936, started internship February 15th.

At the Interns' Clinical Pathological Conference, held at the Peters House, February 16th, the case was presented by Dr. William W. Teahan.

The Interns' formal dance and Valentine party, held at the Peters House, February 13th, was a very successful affair with about eighty people present.

### St. Joseph's Hospital

The regular monthly meeting of the Staff Association was held at noon on Thursday, February 11. Dr. Alexander Marble of the Joslin Clinic, Boston, gave a talk on "Protamine Insulin." He described the origin and chemistry of protamine insulin and its development at the Joslin Clinic during the past two years. He recommended it as useful in a large group of the cases of diabetes. The discussion was opened by Dr. William S. Streker. Following the meeting, a collation was served. The topic for the meeting on March 11 will be "Amenorrhoea in Relation to Endocrinology."

Open house will be held on Thursdays in the Medical, Neurological and Cardiological Departments. Combined rounds will start in the Out-Patient at 9:30 A. M. and proceed through the wards. All interested physicians are invited to attend and to join in the discussion of cases.

### Homeopathic Hospital of Rhode Island

At the meeting of the General Staff held on January 26, the following cases were presented: "Spike Fixation for Femoral Neck Fractures," by Dr. Henry F. McCusker; "Separation of Placenta at Five Months," by Dr. George W. Webster; "Hydrocele and Hernia," by Dr. Edmund A. Sayer.

On February 16, the regular monthly meeting of the General Staff was held at 12:15 P. M. The program: "Head Injuries," by Dr. James H. Fagan; "Eclampsia with Choked Disk," by Drs. George W. Webster and William M. Muncey. Luncheon was served following the meeting.

### Minutes of the Caduceus Club

The monthly meeting of the Caduceus Club was held at the T. K. Club, Monday evening, Feb. 8, 1937. The meeting was called to order by the President, Dr. Earl Mara. The report of the Secretary was read and approved. On a motion by Dr. Sprague, it was voted that the Grievance Committee consider the problem of absentee members and the unethical activities of several Physicians in the Community. Following a motion by Dr. Farrell, it was voted that Dr. Stanley Sprague be permitted to address the Kiwanis Club on the subject of Social Disease. Dr. Farrell, Chairman of the Education Committee, reported that the City Officials had granted the Caduceus Club the use of the Senior High Auditorium for the remaining lectures. It was voted that at succeeding monthly meetings there would be a Topic for open discussion by Club Members; the Topic for the next monthly meeting being, The School Health Department in relation to the Local Physician. Following a collation, the meeting was adjourned.

Respectfully submitted,  
GEORGE B. McCLELLAN, M.D.

### Local Events

JANUARY 27. The Annual Banquet of the Jacobi Medical Club was held at the Narragansett Hotel and attended by members and their wives. Dr. Abraham Myerson, Professor of Psychiatry at Harvard and Tufts Medical School, gave an interesting talk on "The Common Neuroses."

FEBRUARY 2. The Rhode Island Chapter of the National Society for the Advancement of Gastroenterology was organized at a meeting attended by Drs. Frederick V. Hussey, Arthur T. Jones, Nathaniel H. Gifford, Isaac Gerber, John F. Kenney, Guy W. Wells, Elihu Wing, John E. Donley, Jesse P. Eddy, Frank A. Cummings.

Officers elected were as follows:

President, Dr. Frank Anthony Cummings,  
Vice President, Dr. John F. Kenney,  
Secretary-Treasurer, Dr. Jesse P. Eddy.

Executive Committee, the officers and

Dr. Frederick V. Hussey,

Dr. Elihu Wing.

Program Committee,

Dr. Guy W. Wells,

Dr. John E. Donley.

It is planned to hold a meeting during May to which all members of the State Society will be invited.

FEBRUARY 12. The William W. Keen Medical Club was entertained by Dr. Alfred L. Potter. Dr. Wilfred Pickles presented a paper on the "History of the Medical School in Brown University."

FEBRUARY 15. At the meeting of the Thirty-four Medical Club, Dr. Clifton B. Leech spoke on "Acute Heart Failure."

FEBRUARY 19. Before the Friday Night Medical Club, Dr. Edward S. Brackett read a paper on "Maternal Deaths at the Providence Lying-In Hospital," a statistical study of the results achieved at the institution during the past three years.

#### AN INSTRUMENT FOR FACILITATION OF THE TWO-POINT DISCRIMINATION TEST

IRA C. NICHOLS, M.D.

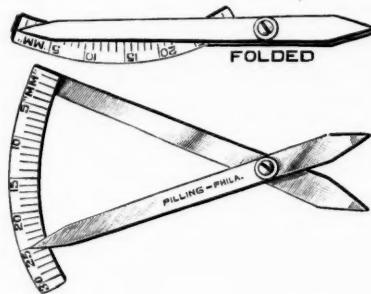
BUTLER HOSPITAL, PROVIDENCE, R. I.

There is a test that should be a part of every complete neurological examination, which is frequently neglected due to the fact that no really adequate instrument for its performance is available. I refer to the two-point discrimination test.

Compasses may be used for this test but it is hard to take off the measurements obtained. There are also several instruments available which combine a two-point tester with other instruments, but these like the proverbial Jack of all trades are masters of none.

The instrument which I have designed is constructed specifically for this purpose. Its chief advantage is that it carries its own scale so that a reading may be taken off directly without applying the points to a rule, which is in practice a time consuming process. A further advantage is that the instrument is constructed on the principle of the draughtsman's proportional dividers so that the distance between the points is magnified on the scale, thereby facilitating the taking off of readings.

The instrument is so designed that the ratio of the length of the arm on one side of the pivot is to the length of the arm on the other side as 1:2.5. The measurements, therefore, are multiplied in direct proportion. The instrument may be folded for ease in carrying.



It occurs to the writer that this instrument might be very useful in many special tasks, such as recording measurements for electrocardiographic films, kymograph records, or in short, wherever many determinations of distances under 30 mm. must be made.

I wish to express thanks to Mr. Carl Stickney of Butler Hospital and to the technical staff of the manufacturer for their assistance in bringing my idea forth in concrete form. The instrument is available through the George P. Pilling & Son Co., Philadelphia.

#### OBITUARY

EDWARD J. LOGAN, M.D.

Dr. Edward J. Logan died at his home, 1171 Westminster Street, April 8, 1936, after a year's illness, mourned by a host of friends and a greater number of patients whose medical, economic, and social adviser he had been for many years. Dr. Logan had been a general practitioner in the City of Providence from 1903 to 1935 when through failing health he was obliged to give up an extensive practice.

Dr. Logan was born in the town of Hampton, Connecticut, the son of Edward and Catherine Logan. At an early age, the family came to Providence where the son attended the grade schools and Mowry Academy. He was graduated from Jefferson Medical College in Philadelphia in May 1903, and licensed to practice in Rhode Island in July 1903.

In April 1917 he married Alice E. Guest who survives him. The scanty leisure that the demands of a general practice permitted him was given to his two hobbies, gardening on a small country place in Scituate, and, in the earlier years, boating and fishing in the waters about Matunuck in South County.

He was a member of the Associate Staffs of St. Joseph's and Homeopathic Hospitals, a Fellow of the American and Rhode Island Medical Associations. His social clubs were the Elks and the Knights of Columbus.

FRED A. COUGHLIN, M.D.  
J. JOSEPH HOEY, M.D.

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JAMES W. LEECH, M.D.

On October 6, 1936, Dr. James William Leech, while attending a private patient at the Jane Frances Brown Memorial Hospital, sank to the floor unconscious and pulseless, bringing to a close a life that in the highest meaning of the word, can be said to have been successful.

He was born in Worcester, January 22, 1881, the son of James and Elizabeth Abbot Leech. While he was still a child his family moved to Providence which was his home the remainder of his life. He grew to manhood in a home where probity was esteemed above material things and all his life, true to his early training, he was guided by the highest ideals of personal honor and a keen sense of duty in his relations with his fellow men.

He attended the public schools of Worcester and Providence, graduating from the Classical High School in 1898. He entered Brown University in the class of 1902. After two years of pre-medical study he entered the University of Pennsylvania School of Medicine and graduated in the class of 1904 with the degree of Doctor of Medicine *cum laude*, among the first ten in his class in scholastic standing. On the first day of July of the same year he began a one year service as interne in the Rhode Island Hospital. From that day to the day of his death, a period of thirty-two years, he served that hospital in one capacity after another and always faithfully and well. He was assistant superintendent from 1905 to 1907. On resigning this position he was appointed to the Department of Ophthalmology of the Out-Patient Department. In 1909 he was advanced to the house as Assistant

Surgeon and became Surgeon in 1917. This appointment he held at the time of his death.

He graced many other positions of honor and trust. From 1916 to 1936 he was Secretary of the Rhode Island Medical Society and at the time of his death its Second Vice President. He was Past President of this Association, Member of the American Academy of Ophthalmology and Otolaryngology and the New England Ophthalmological Society, Fellow of the American College of Surgeons, Past President of the Rhode Island Ophthalmological and Otological Society, Surgeon-in-Chief, Eye Department, Charles V. Chapin Hospital; Consulting Ophthalmologist to the Providence Lying-In Hospital, Providence; Memorial Hospital, Pawtucket; Westerly (R. I.) Hospital and Consulting Laryngologist to the Butler Hospital.

This enumeration of the positions he held in the medical societies and hospitals of the State gives but a faint idea of the debt the profession owes to his memory.

The service which he rendered the Rhode Island Medical Society as Secretary for twenty years was, if not the most useful, at least the most conspicuous of his public activities. It detracts in no measure from the credit due to the many physicians with whom he cooperated in the work of the Society to say that for the greater part of his term he was the spirit which directed its varied activities and assured a continuity of policy and effort. Calm, impartial and unhurried he worked indefatigably to advance the interest of the Society and, whatever cross currents of personal opinion there may have been within its ranks, to present a united front to the general public. When interviewed by the press, his statements were straightforward and dignified, marked by a happy faculty of knowing not only what to say but what to leave unsaid. The growth of the Society in usefulness to its members and in influence in the State is due in great measure to his unremitting labors, his wisdom and his tact.

His interest in this association whether in office or out was active and sustained.

On resigning his position of assistant superintendent of the Rhode Island Hospital he became associated with Dr. Frederick T. Rogers in the practice of otolaryngology and ophthalmology. That association continued until Dr. Rogers' retirement from active practice. Devoted to his profession and genuinely interested in his patients, he

attracted a large and loyal following who admired and loved his personal qualities as much as they prized his professional skill.

In his personal as well as in his professional life, was he truly successful. He was married in 1909 to Jane Russell of Philadelphia, a sister of a medical school classmate. She, with two children, Mrs. Stephen Williamson of Williamsport, Penn., and James Rogers Leech, a senior of Amherst College, survive him. Respected and beloved by his family, by his patients, his friends and professional colleagues, he died at the peak of his usefulness. To the members of this association who knew him as a colleague and a friend, the memory of his lovable personality and his useful life will be forever fragrant and inspiring.

EDWARD S. BRACKETT, M.D.

### RECENT BOOKS

**PHYSICAL THERAPEUTIC METHODS IN OTOLARYNGOLOGY.**  
By Abraham R. Hollender, M.D., F.A.C.S., pp. 442  
with 189 illustrations. Cloth, \$5.00. St. Louis, The  
C. V. Mosby Company, 1937.

This is the best and most practical book on physiotherapy of all kinds as applied to diseases of the ear, nose, throat and head, that I have seen. I would put it in the category of "must" reading for anyone using the various electro- and photo-therapeutic devices in head and neck conditions.

The first section of the book is given over to the description of the various types of currents, lights, and agents used, and gives a fairly clear idea of them, and their mode of action. Conventional, and short wave diathermy are discussed and compared in special chapters by Disraeli Kobak, and the various indications and contra-indications given. There are also chapters on electro-surgery and light therapy, X-ray and radium.

The second part of the book deals in the various diseases of the head and neck, and the means of treatment available. It is not a radical approach to ear, nose, and throat therapy. The author is very sane in his viewpoints, and is not at all dogmatic. He by no means feels that physiotherapy is the best means of treatment of every condition. The sections on electro-surgery of the tonsils should be read by everyone. It is a very sane exposition of its merits and demerits.

There is a very clear discussion of the uses of zinc ionization of the nose for hay fever and other allergic conditions. The chapter of zinc ionization of the ear is by Friel of London, one of the originators of this treatment. All in all, it is a very practical book on physio-therapy. I recommend it both to otologists and general men.

GORDON J. McCURDY, M.D.

**THE MANAGEMENT OF OBSTETRICAL DIFFICULTIES.** By Paul Titus, M.D., with 314 illustrations including four color plates. The C. V. Mosby Company, St. Louis, 1937. Cloth, \$8.50

As the title of this work signifies, and as is further stated in his preface, the special purpose of the author is to give to the student and practitioner of obstetrics a book of reference on management and treatment. Only so much of normal physiology, pathology and etiology of the different phases of the subject as are necessary to explain the rationale of the outlined treatment are given. The style of presentation is clear, logical, forceful and authoritative and the treatment outlined is the author's own, which he has found to be the most effective in his personal experience. Where more than one method of attack on a particular problem has been advocated by differing authorities he has not hesitated to signify his preference.

The result is a volume on treatment which should have a wide appeal to both the younger men who are starting their work in obstetrics and to the older men who wish to brush up a bit on some of the later developments in treatment, e.g. the treatment of toxemias and the use of analgesia, etc.

Dr. Titus, recognizing the close relations of gynecology and obstetrics, has included sections on sterility, postpartum uterine misplacements and their treatment, tumor growths, ectopic pregnancy and electro-surgical coagulation and ionization for postpartum cervicitis.

His instructions are explicit: where illustrations are needed they are plentifully supplied, many of them original; where diet lists or printed instructions or prescriptions to patients seem helpful, he has given them.

Long recognized as a student of pregnancy toxemias, his teachings as to the use of hypertonic glucose solutions are universally accepted and are here given in detail.

Dr. Titus has indeed given us an authoritative and valuable book to which the busy practitioner can turn to find a sound answer to his particular difficulty or to which the student who is desirous of delving more deeply into the subject may turn to find an extensive list of references following each chapter to guide him in his reading.

GEORGE W. WATERMAN, M.D.

The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder; nor should the course of conduct of the physician directly or indirectly, tend to diminish the trust reposed in the attending physician. In embarrassing situations, or wherever there may seem to be a possibility of misunderstanding with a colleague, the physician should always seek a personal interview with his fellow.

—From the *Code of Ethics of the A. M. A.*